

216 may include, for example, integrated circuits and other circuitry for transceiver circuitry 90 and other circuitry in device 10.

[0043] Transmission line 92 may be a coaxial cable or other suitable transmission line for coupling the circuitry of printed circuit 214 (e.g., transceiver circuitry 90) to antenna 40. Transmission line 92 may have opposing first and second ends. The first end of the cable may have a first radio-frequency cable connector such as first connector 210. The opposing second end of the cable may have a second radio-frequency cable connector such as second connector 206. First connector 210 may be configured to mate with a radio-frequency connector such as printed circuit connector 212 on printed circuit 214 (e.g., a connector that is soldered to metal traces in the circuitry of printed circuit 214). Second connector 206 may be configured to mate with a corresponding radio-frequency connector that is coupled to and/or forms a part of elongated member 202 such as connector 208. Connectors such as connector 212, 210, 206, and 208 may be any suitable radio-frequency connectors such as MCX (micro coaxial connector) connectors, other coaxial connectors such as connectors that attach with clips, stab-in connectors, SMA (subminiature version A) connectors, etc. The use of threaded radio-frequency cable connectors such as MCX connectors for forming connectors 212, 210, 206, and 208 is illustrative.

[0044] As shown in FIG. 6, connector 212 mates with connector 210 to couple transmission line 92 to printed circuit 214 and transceiver circuitry 90 and other electrical components 216 on printed circuit 214. Connector 206 mates with connector 208 of antenna feed member 202 to couple transmission line 92 to antenna 40. If desired, circuitry in components 216 and/or circuitry associated with structures 104 may include antenna tuning circuits, impedance matching circuitry, switches, impedance monitoring circuits, filters, and/or other radio-frequency circuitry. This circuitry may, if desired, be interposed between transceiver circuitry 90 and transmission line 92 and/or between transmission line 92 and antenna 40. Configurations in which transmission line 92 is formed from one or more linked transmission line segments with intervening blocks of tuning circuitry, impedance matching circuitry, switches, impedance monitoring circuitry, filters, and/or other radio-frequency circuitry may also be used.

[0045] Antennas 40 in device 10 may be formed using any suitable type of antenna (e.g., slot antennas, inverted-F antennas, patch antennas, monopole antennas, dipole antennas, Yagi antennas, planar inverted-F antennas, loop antennas, other antennas, hybrid antennas that are formed from antenna resonating elements of different types, etc.). These antennas may include, for example, one or more antennas such as single-band or dual-band antennas for supporting wireless local area network (WiFi®) communications and/or other wireless communications.

[0046] In the example of FIG. 6, antenna 40 is a slot antenna formed from a through hole (opening 114) that passes through leg LG formed from conductive structures 104. Other types of antenna may be used, if desired. There may be multiple antennas 40 in each of one or more legs LG. For example, a given leg LG in device 10 may include a first antenna 40 for handling 2.4 GHz wireless local area network communications and a second antenna 40 for handling 5 GHz wireless local area network communications.

[0047] To block internal components such as feed member 202 from view, one or more antennas 40 may be covered with a cosmetic insulating layer. For example, opening 114 may be covered with a cosmetic dielectric cover such as cover 222. Cover 222 may be formed from polymer, glass, ceramic, or other solid dielectric. The interior of opening 114 may be filled with a gaseous dielectric and/or solid dielectric. In configurations for leg LG in which leg LG is cylindrical, cover 222 may have a matching cylindrical shape (e.g., so that the outer surfaces of cover 222 and leg LG match and so that the external surface of cover 222 lies flush with the surrounding portions of the external surface of leg LG).

[0048] As shown in FIG. 4, cover 222 may include a single cover member (e.g., a curved plastic member or other insulating structure) that spans multiple antennas 40. If desired, separate covers 222 may be provided for each antenna 40 (e.g., four covers 222 may be used to cover the respective front and rear sides of the two openings 114 in a pair of antennas 40). The use of a single cover member (for each side of leg LG) that overlaps multiple openings 114 in conductive structures 104 and thereby serves as a shared cover for multiple slot antennas is illustrative.

[0049] The foregoing is merely illustrative and various modifications can be made to the described embodiments. The foregoing embodiments may be implemented individually or in any combination.

What is claimed is:

1. An electronic device, comprising:
an electronic device housing supported by at least one leg;
a slot antenna formed from an opening that passes through the leg;
radio-frequency transceiver circuitry within the electronic device housing that is configured to transmit and receive wireless communications; and
a transmission line coupled between the radio-frequency transceiver circuitry and the slot antenna.
2. The electronic device defined in claim 1 wherein the electronic device housing has a box shape with corners and the leg is coupled to a given one of the corners.
3. The electronic device defined in claim 2 wherein the leg comprises an elongated metal member that runs along an edge of the electronic device housing at the given one of the corners.
4. The electronic device defined in claim 3 wherein the elongated metal member is a metal rod and the opening is a through hole with a rectangular outline.
5. The electronic device defined in claim 4 wherein the slot antenna has first and second antenna feed terminals coupled to first and second portions of the metal rod that are respectively on opposing first and second sides of the opening.
6. The electronic device defined in claim 5 wherein the metal rod comprises a cylindrical rod.
7. The electronic device defined in claim 1 wherein the leg has an additional opening and the electronic device further comprises an additional slot antenna formed from the additional opening.
8. The electronic device defined in claim 7 wherein the slot antenna is configured to operate in a 2.4 GHz communications band and wherein the additional slot antenna is configured to operate in a 5 GHz communications band.
9. The electronic device defined in claim 1 wherein the transmission line comprises a coaxial cable with a threaded